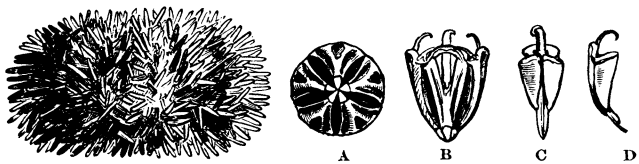
THE FOOD OF THE COMMON SEA-URCHIN.

BY J. W. DAWSON, LL.D.



THOUGH this creature* is so common on the north-eastern coasts of North America, the nature of its food does not seem to be generally known. In dissecting some specimens collected at Tadoussac, Canada, last summer, I found the intestine full of small round pellets, which proved to be made up of the minute confervoid sea-weeds that grow on submerged rocks, mixed with many diatoms and remains of small sponges. It would thus appear that the curious apparatus of jaws and teeth possessed by this creature is used in a kind of browsing or grazing process, by which it scrapes from submarine rocks the more minute sea-weeds which cling to them, and forms these into solid balls, which are swallowed, and in this state passed through the intestinal canal, where they may be found in all stages of digestion. The sea-urchin is thus a kind of submarine rodent, in so far as its habits are concerned. From these pellets the microscopist may, after digesting them in nitric acid, obtain great numbers of beautiful diatoms (or microscopic plants, for a long time classed with the Infusoria), which are collected by the animal with its food, and whose silicious crusts escape the digestive

*The cut represents the Common Sea-Urchin or Sea-Hedgehog (*Euryechinus drobachiensis* Verrill), one-third of the natural size. A, the eating apparatus seen from above, forming an inverted cone, the apex consisting of the cutting "teeth" or plates, which project out of the mouth-opening, as the animal moves mouth downwards. The five teeth move towards the centre during the act of eating. B, the same seen sideways. C, a single tooth, the lower point forming the cutting edge. D, the same seen sideways, the hook at the upper end with the other four, serving to retain the apparatus (sometimes called "Aristotle's Lantern") in place.

process. Though the sea-urchin is thus a vegetarian, yet near the fishing stations it may often be seen to feed greedily on the garbage of the fisheries, but I have not known it to attack living animals. I fancy that its mode of life at Tadoussac, where it is found in great abundance, may be taken as representing its natural habits, when remote from places where the offal of fisheries and similar matters may be found.

THE ROYAL FAMILIES OF PLANTS.

BY C. M. TRACY.

THOSE who study plants divide them into groups which they call families. This arrangement both expresses very closely the system of nature, and commends itself to the student as being at once pleasant to contemplate and easy to understand.

These families of plants are in one respect like those of men: they have their distinctive characters, and transmit them onward, from generation to generation, with great steadiness; but, as every likeness is apt to be balanced by a difference, these, unlike their human prototypes, never intermingle, but keep a lineal succession more pure and guarded than even that of the children of Israel.

In countries where the "divinity that hedges kings" is more readily admitted and revered than among us, mention is largely made of families termed "royal." By virtue of blood more pure, or strong, or ethereal, than runs in plebeian veins, these are supposed to furnish candidates for the diadem, whose claims are to be adjusted only by and among themselves, no competitor from without being recognized for a moment. Now without stopping to discuss the rights and wrongs of this question in the light of